



Boss Frog Installation Instructions Frog Arms™ Fender Brace



Introduction

Congratulations! You have purchased one of the highest quality Miata products available today. Installing your new fender brace involves many steps, but is really not that difficult if you take your time and understand what you are trying to accomplish. These instructions will clearly illustrate the methods we have found to work the best. If something does not fit properly, we would like to know about it, so that we can improve our products. Contact us at bossfrog@bossfrog.biz or see our website at www.bossfrog.biz.

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Safety

The most important factor when installing a Boss Frog product is your personal safety.

- Always use safety glasses while installing the product.
- Use care when operating power tools, and always follow manufacturer's recommendations.
- Beware of sharp metal edges and corners.

Boss Frog Warranty

A. Standard Boss Frog Warranty

Boss Frog Inc. (Boss Frog) warrants, in accordance with the provisions below, to the original purchaser for the period of 30 days from the date of delivery of a Boss Frog product, that the product is free from defects in material or workmanship. Boss Frog's obligation under this warranty is to repair or replace, at Boss Frog's election, without charge and at Boss Frog's place of business, any part or parts of the product which, in the judgment of Boss Frog, prove to be defective.

THIS WARRANTY AND BOSS FROG'S OBLIGATION HEREUNDER IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE, and all other obligations or liabilities of Boss Frog for incidental and consequential damages resulting from the design, manufacture, sale or use of the machine. No person is authorized to make any warranty or assume for Boss Frog any liability not strictly in accordance with this warranty.

B. Purchased Product Warranty

This warranty does not apply to component parts not manufactured by Boss Frog, except to the extent of their individual manufacturer's guarantees.

C. Warranty Limitations and Exclusions

This warranty shall not apply to any product which, in the judgment of Boss Frog, has been altered or tampered with in any way, or has been subjected to misuse, neglect or accident. This warranty applies only to the original purchaser and may not be assigned without the express written consent of Boss Frog, Inc.

D. Product Changes and Improvement

Boss Frog is continually striving to improve its products, and therefore reserves the right to make improvements or changes when it becomes practical and possible to do so, without incurring any obligations to make changes or additions to the products sold previously.

Kit Contents – Double Hoop Models

Parts

- (1) Fender Brace RH
- (1) Fender Brace LH
- (2) Fender Brace Backer Plates
- (4) Fender Bushings

Hardware

- (4) 5/16-24 x 1 Soc Hd Cap Screw
- (10) 5/16/M8 Flat Washer
- (10) 5/16 Lock Washer
- (4) 5/16 Hex Nut, grade 8
- (6) M8x30-1.25 Hex Hd Cap Screw
- (4) M6x45-1.00 Hex Hd Cap Screw
- (4) M6 Flat Washer
- (4) M6 Lock Washer

Tools Required

- Safety Glasses
- Jack and blocking materials
- Metric and US wrenches and sockets;
- Socket extension
- 1/4" hex wrench
- 5/16" drill bit
- Drill
- Utility knife
- Phillips screwdriver
- Locktite (optional)

Guide to the instructions:

Many people who will install this product do not like to read instructions, but need some general direction on what to do. For these people, we have provided a summary of the steps (in bold) preceding the detailed instructions.

We recommend setting aside some plastic bags or small containers to put fasteners and small parts during disassembly. These parts will be reused during final assembly, and there is nothing more frustrating than not being able to find a part or fastener when you are almost done.

While we supply lockwashers, some people prefer to use locktite – your choice.

REMOVE THE FENDER

1) One side at a time.

- We recommend installing one fender brace at a time, so the opposite side can be used as a reference.
- There are many various fasteners attaching each fender to the chassis, so it is important to keep all the fasteners together.

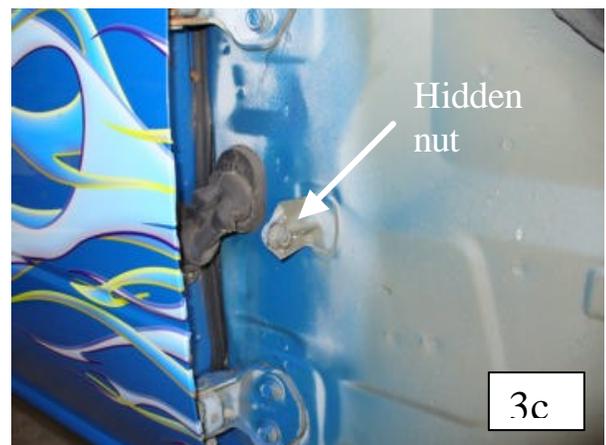
2) Jack one side and remove the front wheel.

- Raise and prop the hood, set the emergency brake, and block the rear tires.
- Using a floor jack, raise the car at the front lift point (see Mazda instructions for location).
- Remove the wheel and tire, and block the car so that it cannot accidentally fall (2a).



3) Remove the Fender.

- Fender removal requires some time and patience. Fender mountings vary from year to year, but these instructions will provide some general guidelines.
- Using a 10mm socket, remove the bolts along the top edge of the fender, including the one inside the door frame over the hinges.
- Remove the plastic inner skirt and braces from the fender. The plastic fastener centers screw out with a Phillips head screwdriver, then pull the whole plug out.
- Remove the various bolts along the bottom edge of the fender.
- Remove the 2 nuts from the horizontal bolts at the very front of the fender.
- Remove the bolts holding the top of the front bumper assembly (3a). Tip the top edge of the bumper forward to reveal a bolt at the very front of the fender (3b). Remove this bolt using a 10mm wrench.
- There is a hidden nut at the rear of the fender (3c), which can be accessed from inside the wheel well. Use a socket with a long extension, and this nut only needs to be loosened (not removed).
- Carefully remove the fender.



4) Loosen the wiring harness.

- There is a wiring harness coming through a grommet at the top of the fender area. Your Fender brace will be sharing this area, so the harness needs to be moved (4a).
- Carefully pull the wiring harness grommet outward from the hole until it is clear.
- Where the harness passes through the inner fender wall, it needs to be just the wires (no bulky covers, tape, etc). Gently pull the harness until you see wires at the inner fender, or carefully remove the plastic covering, tape, etc from the wires where it comes through the inner fender area.



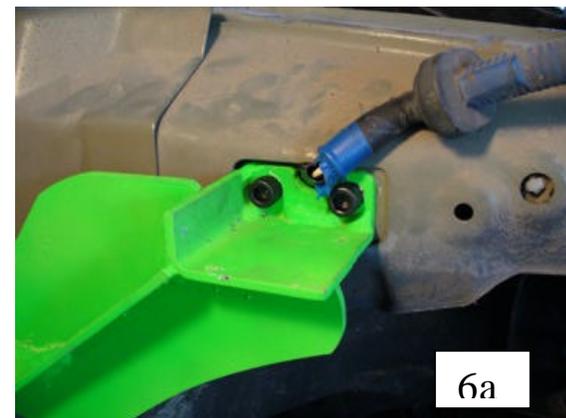
5) Remove the door hinge bolts.

- Mark the hinge locations with a pencil (5a).
- With the door closed, remove the bottom bolt of the top hinge, and both bolts of the bottom hinge. Caution - Do not open the door again until these bolts are replaced.
- Remove the 2 bolts at the rear edge of the wheel well using a 10mm socket.



6) INSTALL THE FENDER BRACE.

- Locate the proper fender brace, and gently place the top edge of the offset foot underneath the wiring harness (6a). The wiring harness wires should be cradled in the notch of the offset foot, then gently tip the foot into the fender cutout, and against the inner fender wall. Be very careful not to pinch the wires.
- Continue tipping the fender brace down into position at the door hinges (6b). Start one of the larger M8x30 bolts (with a washer and lockwasher) through the round hole (second from the bottom) in the fender brace, and into the matching door hinge hole. If this hole is slightly out of alignment with the threaded hole, it can be filed to fit.
- Start the other two M8 hinge bolts (with washers and lockwasher) into their threaded holes.
- Find the two smaller M6x45 hex head bolts, and locate the two holes at the curved front edge of the fender brace. For each of the holes, install a 1/2" bushing between the Frog Arm and the inner fender, and insert the M6 bolt through the bushing and into the threaded hole, with a washer and lockwasher on each. Do not tighten any of these bolts yet.
- Make sure that all the bolts and fender brace fit properly, and make any adjustments necessary. Also make sure the offset foot fits into the inner fender hole and flush against the inner wall without pinching the wires. If there is any equipment (fuse blocks, etc) behind the offset foot in the engine compartment, temporarily remove it.
- Using a 5/16" drill, carefully drill a hole through the inner fender wall, using the rear hole of the offset foot as a guide. Be sure to avoid damaging any of the



wires or other equipment inside the engine compartment.

- Install the backer plate inside the engine compartment (6c), and install the two 5/16 x1 socket head bolts with washers, lock washers and nuts. Be very careful again not to pinch the wires.
- Once all fasteners are in place, tighten everything down, and check door operation (adjust if necessary).

7) **REPLACE THE FENDER.**

- Reverse the process of removing the fender.



6c

8) **REPEAT ON THE OTHER SIDE.**

- 9) **Enjoy your new Frog Arm™ Fender Braces.** Thanks for buying Boss Frog!